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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LESPERANCE, JEAN E	

ART UNIT	PAPER NUMBER
2674	

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/835,458	ANWAR, MAJID	
	Examiner	**Art Unit**	
	Jean E Lesperance	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 24 January 2005.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-31 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-31 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 16 April 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2/11/05, 2/14/05.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed January 24, 2005 is entered and claims 1-31 are pending.

2. The information disclosure statements filed February 11 and 14, 2005 are considered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-31 are rejected under 35 USC 102 (e) as being unpatentable over US Patent # 6,717,573 ("Shahoian et al.").

As per claim 1, Shahoian et al. teach a host computer Fig.1 (14) which includes a processor, memory, and a display; host computer system 14 preferably includes a host microprocessor 100, a clock 102, a display screen 26, and an audio output device 104. The host computer also includes other well known components, such as random access memory (RAM), read-only memory (ROM), and input/output (I/O) electronics (not shown) and Fig.1 (26) corresponding to system code stored within the memory and adapted to be executed by the processor to provide a digital representation of a

document including data content and a page structure representative of a page layout of the document; Fig.8 (26) (see portion of pages 404 and 406) corresponding to a rendering engine for rendering an image of at least a portion of the page layout of the digital representation on the display; when moving the cursor to a blank area of an active window 402, the user can depress the button and feel the inertia of the window 402 and push that window into the background, behind other windows 404 and 406, so that the window 404 at the next highest level becomes active. As the next window 404 becomes active, the user feels a detent in the button's Z-axis signifying that the next window is now active. An analogy is a "turnstile" having multiple sections, where as each section becomes active, the user receives haptic feedback (column 22, lines 15-23) corresponding to a display monitor for detecting movement of an object across the display; haptic feedback can also be output to the user to confirm the pressing of a key or a button by the user. When an icon or other object is dragged by the cursor, a sensation of icon weight can be implemented as a vibration tone where the tone frequency indicates weight of selected object (column 20, lines 34-39) corresponding to an interface process for comparing properties of the detected movement to properties of a set of predefined movements associated with a set of user interface commands for manipulating and viewing documents to identify an input of a user interface command; and If the mass is rotated quickly enough and/or if the inertial forces on the housing are of high enough magnitude, the mouse may be moved or vibrated along the y-axis and the portion of the forces output in the y-axis may cause a controlled object, such as a

displayed cursor, to change its y position in a graphical environment in response to motor activation (column 11, lines 8-14) corresponding to a navigation module for navigating through the digital representation of the document by changing the rendered portion of the page layout in response to an identification by the interface process of an inputted user interface command.

As per claim 2, Shahoian et al. teach a common human computer interface devices used for such interaction include a stylus (column 1, lines 29-31) corresponding to the display comprises a touch sensitive screen

As per claim 3, Shahoian et al. teach a cursor control Fig.8 (400) corresponding to the display comprises a display screen capable of depicting, a cursor and wherein the object moving across the display is the cursor

As per claim 4, Shahoian et al. teach a tactile mouse which can output haptic sensations on a mouse button or other moveable portion of an interface device Fig.4 (250) corresponding to a tactile input device selected from the group consisting of touch-pad, joystick, mouse, trackball and thumb wheel device, wherein the display indicates movement generated by the tactile device.

As per claim 5, Shahoian et al. teach a host computer Fig.1 (14) corresponding to the processor, memory, and display are arranged as a data processing platform for a device selected from the group consisting of a hand-held computer, a telephone, a mobile data terminal, a set top box, an embedded processor, a notebook computer, a computer workstation, a printer, a copier, a facsimile machine, an in-car system, a

domestic appliance, an audio player, a microwave oven, a washing machine, and a refrigerator.

As per claim 6, Shahoian et al. teach haptic feedback can also be output to the user to confirm the pressing of a key or a button by the user. When an icon or other object is dragged by the cursor, a sensation of icon weight can be implemented as a vibration tone where the tone frequency indicates weight of selected object (column 20, lines 34-39) corresponding to a velocity detector for determining a velocity vector associated with the identified detected movement.

As per claim 7, Shahoian et al. teach haptic feedback can also be output to the user to confirm the pressing of a key or a button by the user. When an icon or other object is dragged by the cursor, a sensation of icon weight can be implemented as a vibration tone where the tone frequency indicates weight of selected object (column 20, lines 34-39) corresponding to means for applying a velocity characteristic to a document within the display.

As per claim 8, Shahoian et al. teach haptic feedback can also be output to the user to confirm the pressing of a key or a button by the user. When an icon or other object is dragged by the cursor, a sensation of icon weight can be implemented as a vibration tone where the tone frequency indicates weight of selected object (column 20, lines 34-39) corresponding to the means for applying a velocity characteristic includes means for causing the rendered image to move across the screen-display at a velocity associated with the determined velocity vector.

As per claims 9, Shahoian et al. teach Fig.8 (26) includes graphical object interface of pages where the haptic feedback mouse of the present invention can provide tactile sensations that make interaction with those graphical objects more compelling (column 19, lines 27-29) corresponding to the interface process includes a page-flip detector capable of responding to the detected movement and wherein the page-flip detector includes means for causing the rendering engine to render an alternate page within the page layout of the digital representation of the document and wherein the navigation module responds to the page-flip detector by rendering another portion of the page layout adjacent a currently rendered portion and wherein the other rendered portion of the page layout has a selected adjacency to the currently rendered portion.

As per claim 10, Shahoian et al. teach Fig.8 (26) includes graphical object interface of pages where the haptic feedback mouse of the present invention can provide tactile sensations that make interaction with those graphical objects more compelling (column 19, lines 27-29) corresponding to the interface process includes a page-flip detector capable of responding to the detected movement and wherein the page-flip detector includes means for causing the rendering engine to render an alternate page within the page layout of the digital representation of the document and wherein the navigation module responds to the page-flip detector by rendering another portion of the page layout adjacent a currently rendered portion and wherein the other rendered portion of the page layout has a selected adjacency to the currently rendered portion.

As per claim 11, Shahoian et al. teach a haptic feedback mouse interface system 10 of the present invention capable of providing input to a host computer and capable of providing haptic feedback to the user of the mouse system Fig.1 (12) corresponding to an input device selected from the group consisting of a touch sensitive display, a touch-pad, a joystick, a mouse, a trackball and a thumb wheel device.

As per claim 12, Shahoian et al. teach Fig.8 (26) includes graphical object interface of pages where the haptic feedback mouse of the present invention can provide tactile sensations that make interaction with those graphical objects more compelling (column 19, lines 27-29) corresponding to the interface process includes a page-flip detector capable of responding to the detected movement and wherein the page-flip detector includes means for causing the rendering engine to render an alternate page within the page layout of the digital representation of the document and wherein the navigation module responds to the page-flip detector by rendering another portion of the page layout adjacent a currently rendered portion and wherein the other rendered portion of the page layout has a selected adjacency to the currently rendered portion.

As per claim 13, Shahoian et al. teach Fig.8 (26) includes graphical object interface of pages where the haptic feedback mouse of the present invention can provide tactile sensations that make interaction with those graphical objects more compelling (column 19, lines 27-29) corresponding to the interface process includes a page-flip detector capable of responding to the detected movement and wherein the page-flip detector includes means for causing the rendering engine to render an

alternate page within the page layout of the digital representation of the document and wherein the navigation module responds to the page-flip detector by rendering another portion of the page layout adjacent a currently rendered portion and wherein the other rendered portion of the page layout has a selected adjacency to the currently rendered portion.

As per claim 14, Shahoian et al. teach Fig.8 (26) corresponding to wherein the navigation module includes a page curl detector for rendering, adjacent a currently rendered portion, another portion of the page layout representative of a portion of an underlying page and wherein the other rendered portion of the page layout has a selected adjacency to the currently rendered portion.

As per claim 15, Shahoian et al. teach Fig.8 (26) corresponding to wherein the navigation module includes a page curl detector for rendering, adjacent a currently rendered portion, another portion of the page layout representative of a portion of an underlying page and wherein the other rendered portion of the page layout has a selected adjacency to the currently rendered portion.

As per claim 16, Shahoian et al. teach If the mass is rotated quickly enough and/or if the inertial forces on the housing are of high enough magnitude, the mouse may be moved or vibrated along the y-axis and the portion of the forces output in the y-axis may cause a controlled object, such as a displayed cursor, to change its y position in a graphical environment in response to motor activation (column 11, lines 8-14) corresponding to wherein the interface process includes a gesturing process for identifying a movement representative of a command for selecting a portion of the page

layout to be rendered and wherein the interface process includes a gesturing process for identifying a movement representative of a command for altering data content of the digital representation of the document and the navigation module further includes means for rendering a page layout as a function of an underlying page layout, for providing context-responsive rendering of content.

As per claim 17, Shahoian et al. teach If the mass is rotated quickly enough and/or if the inertial forces on the housing are of high enough magnitude, the mouse may be moved or vibrated along the y-axis and the portion of the forces output in the y-axis may cause a controlled object, such as a displayed cursor, to change its y position in a graphical environment in response to motor activation (column 11, lines 8-14) corresponding to wherein the interface process includes a gesturing process for identifying a movement representative of a command for selecting a portion of the page layout to be rendered and wherein the interface process includes a gesturing process for identifying a movement representative of a command for altering data content of the digital representation of the document and the navigation module further includes means for rendering a page layout as a function of an underlying page layout, for providing context-responsive rendering of content.

As per claim 18, Shahoian et al. teach if the user releases the button and then depresses the button again, the "puncture holes" the user previously made allow the button to be depressed more easily through those previously-punctured layers and are signaled by significantly diminished spring or detent forces or distinctly different force profiles. The user knows which layer is enabled by how many decreased-force

punctures the user feels before reaching an unpunctured layer, which has a noticeably higher force (a stiff rubber diaphragm is a good analogy). In some embodiments, double clicking on the unpunctured layer causes the selected window to be displayed as the active layer (column 21, lines 56-67) corresponding to wherein the interface process includes a page-zoom detector for identifying a movement representative of a command for changing a scale of the display and wherein the page-zoom detector identifies a velocity characteristic of the movement, and the scale of the display changes as a function of the velocity characteristic with a predefined inertia.

As per claim 19, Shahoian et al. teach if the user releases the button and then depresses the button again, the "puncture holes" the user previously made allow the button to be depressed more easily through those previously-punctured layers and are signaled by significantly diminished spring or detent forces or distinctly different force profiles. The user knows which layer is enabled by how many decreased-force punctures the user feels before reaching an unpunctured layer, which has a noticeably higher force (a stiff rubber diaphragm is a good analogy). In some embodiments, double clicking on the unpunctured layer causes the selected window to be displayed as the active layer (column 21, lines 56-67) corresponding to wherein the interface process includes a page-zoom detector for identifying a movement representative of a command for changing a scale of the display and wherein the page-zoom detector identifies a velocity characteristic of the movement, and the scale of the display changes as a function of the velocity characteristic with a predefined inertia.

As per claim 20, Shahoian et al. teach If the mass is rotated quickly enough and/or if the inertial forces on the housing are of high enough magnitude, the mouse may be moved or vibrated along the y-axis and the portion of the forces output in the y-axis may cause a controlled object, such as a displayed cursor, to change its y position in a graphical environment in response to motor activation (column 11, lines 8-14) corresponding to wherein the interface process includes a gesturing process for identifying a movement representative of a command for selecting a portion of the page layout to be rendered and wherein the interface process includes a gesturing process for identifying a movement representative of a command for altering data content of the digital representation of the document and the navigation module further includes means for rendering a page layout as a function of an underlying page layout, for providing context-responsive rendering of content.

As per claim 21, Shahoian et al. teach If the mass is rotated quickly enough and/or if the inertial forces on the housing are of high enough magnitude, the mouse may be moved or vibrated along the y-axis and the portion of the forces output in the y-axis may cause a controlled object, such as a displayed cursor, to change its y position in a graphical environment in response to motor activation (column 11, lines 8-14) corresponding to wherein rendering engine includes means for rendering page layout features and user interface controls while in an active state.

As per claim 22, Shahoian et al. teach Fig.8 (26) corresponding to means for controlling a transparency characteristic of a document presented on the display and

means for controlling a transparency characteristic of selected portions of the document for adjusting visibility of the selected portions relative to other portions of the document.

As per claim 23, Shahoian et al. teach Fig.8 (26) corresponding to means for controlling a transparency characteristic of a document presented on the display and means for controlling a transparency characteristic of selected portions of the document for adjusting visibility of the selected portions relative to other portions of the document.

As per claim 24, Shahoian et al. teach haptic feedback can also be output to the user to confirm the pressing of a key or a button by the user. When an icon or other object is dragged by the cursor, a sensation of icon weight can be implemented as a vibration tone where the tone frequency indicates weight of selected object (column 20, lines 34-39) corresponding to wherein a velocity detector determines a page velocity during a document drag operation controlled by movement of the tactile input device and wherein the navigation module employs the determined page velocity to redraw the document in a series of pictures that portray the document as moving across the screen.

As per claim 25, Shahoian et al. teach a particular magnitude of the kinesthetic force is determined by the position of the mass with respect to the magnet at that point in time. Thus, a strong attraction (or resistive) force is applied when the mass is very close to the magnet, while a weaker attraction (or resistance) is applied when the mass has been rotated to a position further from the magnet (column 13, lines 20-26) corresponding to means for measuring a magnitude of the page velocity and redrawing the image as a function of measured magnitude.

As per claim 26, Shahoian et al. teach A kinesthetic mode can be controlled in either direction of the button in its degree of freedom by moving the mass against a corresponding side of the stop and causing a force on the button by continuously forcing the mass against the stop (column 15, lines 29-33) corresponding to including means for measuring a direction of the page velocity and for redrawing the image as a function of measured direction.

As per claim 27, Shahoian et al. teach haptic feedback can also be output to the user to confirm the pressing of a key or a button by the user. When an icon or other object is dragged by the cursor, a sensation of icon weight can be implemented as a vibration tone where the tone frequency indicates weight of selected object (column 20, lines 34-39) corresponding to a velocity detector determines a page velocity during a document drag operation controlled by movement of the tactile input device and wherein, upon release of said tactile input device from the document, a displayed image of the page continues to move in a direction established by the page velocity determination.

As per claim 28, Shahoian et al. teach Rate control with an active button can also be useful for scrolling documents or other objects. For example, pushing the button a greater distance down (against a spring force) can increase the speed of scrolling, and allowing the button to move upward can decrease the scrolling speed, similar to the scrolling in the Wingman force feedback mouse from Logitech Corp. Since most scrolling is vertically oriented in the GUI, this is well correlated to a vertical button depression and is a natural feature (column 22, lines 49-57) corresponding to

following release of said tactile input device from the document, said displayed image of the page continues to move in said direction until it is stopped by a user action.

As per claim 29, Shahoian et al. teach Rate control with an active button can also be useful for scrolling documents or other objects. For example, pushing the button a greater distance down (against a spring force) can increase the speed of scrolling, and allowing the button to move upward can decrease the scrolling speed, similar to the scrolling in the Wingman force feedback mouse from Logitech Corp. Since most scrolling is vertically oriented in the GUI, this is well correlated to a vertical button depression and is a natural feature (column 22, lines 49-57) corresponding to release of said tactile input device from the document, the page velocity decreases by a constant page inertia until it reaches zero.

As per claim 30, Shahoian et al. teach haptic feedback can also be output to the user to confirm the pressing of a key or a button by the user. When an icon or other object is dragged by the cursor, a sensation of icon weight can be implemented as a vibration tone where the tone frequency indicates weight of selected object (column 20, lines 34-39) and see Fig.8 (26) corresponding to the page velocity is variable in response to movement of said tactile input device.

As per claim 31, Shahoian et al. teach haptic feedback can also be output to the user to confirm the pressing of a key or a button by the user. When an icon or other object is dragged by the cursor, a sensation of icon weight can be implemented as a vibration tone where the tone frequency indicates weight of selected object (column 20, lines 34-39) and see Fig.8 (26) corresponding to a velocity detector determines a page

velocity during a document drag operation controlled by movement of the tactile input device and for multi-page documents, the page velocity is used for panning different pages of a document across the screen at a rate determined by a page velocity set by dragging one page of the document.

Response to Amendment

4. Applicant's arguments filed January 24, 2005 have been fully considered but they are not persuasive. The rejection under 112 first paragraph is withdrawn. The applicant argued that the prior art, Shahoian et al., does not teach "a process for detecting and initiating the mouse vibration command and an interface process for detecting a user interface command independent of visible elements on a display and based on detected movement across the display". Examiner disagrees with the applicant because the prior art teaches when moving the cursor to a blank area of an active window 402, the user can depress the button and feel the inertia of the window 402 and push that window into the background, behind other windows 404 and 406, so that the window 404 at the next highest level becomes active. As the next window 404 becomes active, the user feels a detent in the button's Z-axis signifying that the next window is now active. An analogy is a "turnstile" having multiple sections, where as each section becomes active, the user receives haptic feedback (column 22, lines 15-23) corresponding to a display monitor for detecting movement of an object across the display; haptic feedback can also be output to the user to confirm the pressing of a key or a button by the user. When an icon or other object is dragged by the cursor, a

sensation of icon weight can be implemented as a vibration tone where the tone frequency indicates weight of selected object (column 20, lines 34-39) corresponding to an interface process for comparing properties of the detected movement to properties of a set of predefined movements associated with a set of user interface commands for manipulating and viewing documents to identify an input of a user interface command; and If the mass is rotated quickly enough and/or if the inertial forces on the housing are of high enough magnitude, the mouse may be moved or vibrated along the y-axis and the portion of the forces output in the y-axis may cause a controlled object, such as a displayed cursor, to change its y position in a graphical environment in response to motor activation (column 11, lines 8-14) corresponding to a navigation module for navigating through the digital representation of the document by changing the rendered portion of the page layout in response to an identification by the interface process of an inputted user interface command. Therefore, the rejection is maintained.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Lesperance whose telephone number is (571) 272-7692. The examiner can normally be reached on from Monday to Friday between 10:OOAM and 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Patrick Edouard, can be reached on (571) 272-7603.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office Whose telephone number is (703) 306-0377.

Jean Lesperance

Jean Les

Art Unit 2674

Date 6/13/2005

Henry N. Tran

HENRY N. TRAN
PRIMARY EXAMINER